Sacramento Metropolitan Air Quality Management District

2010 Annual Monitoring Network Plan

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1.0 Introduction

State and Local agencies that conduct ambient air monitoring for regulatory purposes are required, by Title 40, Code of Federal Regulations, Part 58.10 (40 CFR 58.10), to submit an Annual Monitoring Network report to the Environmental Protection Agency (EPA), no later than July 1st, each year, starting July 1, 2007. The report must contain specific monitoring network information and the report must be presented for a 30-day public review period prior to submittal to EPA. This report covers the period: January 1, 2009-December 31, 2009.

The primary purpose of this ambient air monitoring network report is to document the existing Sacramento County State and Local Air Monitoring sites (SLAMS), which also includes NCore, Speciated Trend Network (STN), Special Purpose Monitoring (SPM), and Photochemical Assessment Monitoring (PAMS) sites, operated by our District and CARB, and to show that the ambient air monitoring network meets the requirements of 40 CFR 58, including Appendix A, C, D, and E, where applicable. The report will include the Federal Reference Method (FRM), Federal Equivalent Method (FEM), and Approved Regional Method (ARM) monitors. Though not required by 40 CFR Part 58, the report also discusses additional SPM monitoring instrumentation being operated, such as Aethalometers and Nephelometers, and surface/upper air meteorological sensors required for the PAMS program. The secondary purpose of this report is to discuss proposed changes (additions, relocations, and terminations of non-SPM monitors) in the ambient air monitoring network that may be proposed to occur within an 18 month period following submittal of this report.

This report is not an "in depth" analysis of the local air monitoring network design. An in-depth analysis of the monitoring network is required every 5 years to determine, at a minimum, if the network meets the monitoring objectives defined in 40 CFR Part 58 Appendix D, whether new sites are needed, whether existing sites are no longer needed, and whether new technologies are appropriate for incorporation in to the ambient air monitoring network. This analysis is due July 1, 2010.

2.0 Overview of Network Operations

The County of Sacramento is located in the middle of California's Central Valley, at the southern end of the Sacramento Valley. Sacramento County has a population of 1.4 million. Sacramento County is the most populated part of the Sacramento--Arden Arcade--Roseville, California Metropolitan Statistical area (MSA) which includes the western sections of Placer and El Dorado County, Yolo County, and parts of Solano and Sutter Counties. The Sacramento MSA is the 25th largest MSA in the USA, based upon population, with a population of 2.1 million people[1] . The Sacramento MSA is a non-attainment area for the Federal 8 hr averaged O_3 standard and is referred to as the Sacramento Federal Nonattainment Area (SFNA). This network plan focuses on the monitors that are operated within Sacramento County. For details on the monitors operated in the other counties within the SFNA, please refer to the Annual Monitoring Network Report for Small Districts in California dated June 2009 prepared by the California Air Resources Board (http://www.arb.ca.gov/aqd/amnr/smnetrpt.doc).

[1] July 1, 2008 population estimate, US Census

Sacramento County is a nonattainment area for the Federal O_3 and PM2.5 standards. Sacramento County is in attainment for the Federal CO, NO_2, and SO_2 standards. It has attained the Federal PM10 standard but is still designated as non-attainment. Sacramento County is a non-attainment area for the California O_3, PM-10, and PM-2.5 health standards. The California Air Resources Board recommended that EPA designate Sacramento County as unclassified for the 2008 Federal Pb standard. Final EPA designations for the 2008 Pb standard are due in November 2010.

The primary focus of the current ambient air monitoring network is the collection of O_3 and photochemical pollutant precursors such as NO_X and VOC, and PM-2.5 data to support SIP development, attainment/non-attainment decisions, public notification, and data for air quality modeling efforts. Sacramento is one of 26 areas in the USA that are required to operate PAMS. Sacramento is one of the 54 areas in the US, with a PM2.5 STN site. The map below identifies the locations of current air monitoring stations within Sacramento County, whether they are a SLAMS site or not. Table 1 gives the location of each station, AQS ID, pollutants monitored and designates whether it is a SLAMS site.

Map of Monitoring Stations in Sacramento County

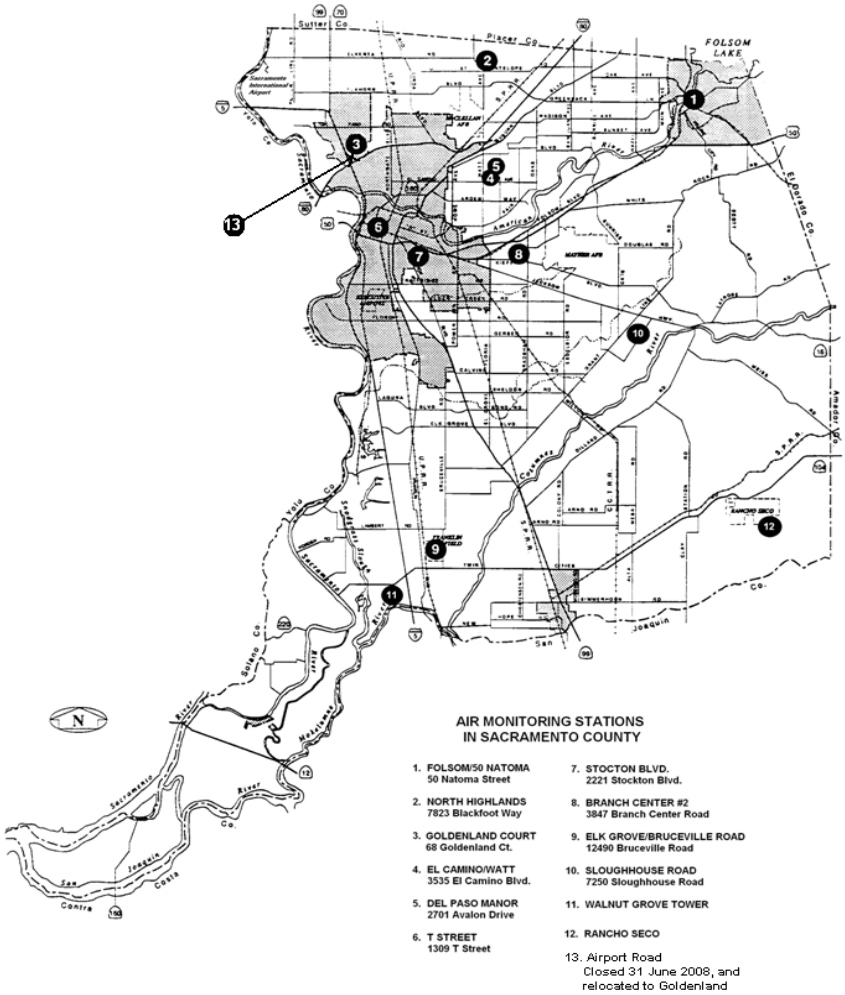

Table 1 – List of Monitoring Sites Within Sacramento County			
Site Name	**Purpose**	**AQS ID**	**Pollutants/Parameters Monitored**
Branch Center Rd #2 3847 Branch Center Road	SLAMS	06-067-0284	PM10-SSI
Elk Grove - Bruceville Road 12490 Bruceville Road	SLAMS/ PAMS	06-067-0011	O_3,NO_2,Total NMHC, Speciated VOC, BAM PM2.5, Ambient Temp., Wind Direction, Wind Speed, Relative Humidity, Barometric Pressure, Precipitation, Ultraviolet Radiation, Solar Radiation, Upper Level Meteorology (Wind Dir., Wind Speed, Virtual Temp.)
Del Paso Manor 2701 Avalon Drive	SLAMS/ PAMS/ STN/ SPM	06-067-0006	O_3,CO,NO_2, SO_2,Total NMHC, Speciated VOC, Carbonyl, BAM PM2.5, TEOM PM10, PM2.5-FRM (main & collocated), PM10-SSI (main & collocated), Speciated PM2.5 (SASS), Black Carbon, Scattering Coeff., Ambient Temp., Wind Dir., Wind Speed, Relative Humidity, Solar Rad.
El Camino – Watt 3535 El Camino	SLAMS	06-067-0007	CO
Folsom-50 Natoma 50 Natoma Street	SLAMS/ PAMS	06-067-0012	O_3,NO_2,Total NMHC, Speciated VOC, BAM PM2.5, Ambient Temp., Wind Direction, Wind Speed, Relative Humidity, Solar Radiation
Goldenland Court	SLAMS/PAMS	06-067-0014	O_3, CO, NO_2, Total NMHC, PM10-SSI, Ambient Temp, Wind Direction, Wind Speed, Relative Humility, Solar Radiation
North Highlands 7823 Blackfoot Way	SLAMS/ SPM	06-067-0002	O_3,CO,NO_2,SO_2, PM10-SSI
Stockton Blvd 2221 Stockton Blvd	SLAMS	06-067-4001	$PM_{2.5}$-FRM, TEOM PM10, PM10-SSI
Sloughhouse Road 7250 Sloughhouse Road	SPM	06-067-5003	O_3, Wind Direction, Wind Speed, PM2.5 (E-BAM, winter PM2.5 SPM study)
T Street 1309 T Street	SLAMS	06-067-0010	O3, NO2, PM10-SSI, BAM PM2.5, PM2.5-FRM, Speciated PM2.5 (SASS), Ambient Temp., Wind Direction, Wind Speed, Relative Humidity, Barometric Pressure
Walnut Grove Tower	Upper Air Research	N/A	Upper level ozone and met (Wind Direction, Wind Speed, and Temperature)
Rancho Seco	SPM	N/A	PM2.5 (E-BAM, winter PM2.5 SPM study)

2.1 Monitoring Objectives and Spatial Scales

The basic three monitoring objectives are to: 1) provide air pollution data to the general public in a timely manner; 2) support compliance with ambient quality standards and emission strategy development; and 3) support air pollution research studies. To support these monitoring objectives there are a variety of types of monitoring sites including sites located to determine the highest pollutant concentration, the representative concentrations in areas of high population density, the impact of major pollution emissions sources, the general background concentration levels, the extent of pollutant transport, and impacts on visibility, vegetation, and other welfare-based impacts.

The physical sitting of an air monitoring station must achieve a spatial scale of representativeness that is consistent with the monitoring objective of the monitor. The spatial scale results from the physical location of the site with respect to the pollutant sources. It

estimates the size of the area surrounding the monitoring site that experiences uniform pollutant concentrations. Table 2 shows the different types of site and the appropriate spatial scale. Table 3 shows each of the monitoring sites in Sacramento County and its criteria pollutant monitoring objectives and spatial scales.

The categories of spatial scale are:

Microscale – An area of uniform pollutant concentration ranging from several meters up to 100 meters.
Middle Scale – Uniform pollutant concentrations in an area of about 100 meters to 0.5 kilometers
Neighborhood Scale – An area with dimensions in the 0.5 to 4.0 kilometer range.
Urban Scale – Citywide pollutant conditions with dimensions ranging from 4 to 50 kilometers.
Regional Scale – A large area, usually rural, of the same general geography and without large sources that extends from tens to hundreds of kilometers.

Table 2 – Site Type and Associated Spatial Scale

Site Type	Appropriate Spatial Scale
Highest Concentration	Micro, Middle, Neighborhood
Population Exposure	Neighborhood, Urban
Source Impact	Micro, Middle, Neighborhood
General/background levels	Urban, Regional
Regional transport	Urban, Regional
Welfare-Related	Urban, Regional

Table 3 – Site Type and Spatial Scale

Site Type	Spatial Scale
HC – High concentration	MI – Microscale
RC - Representative Concentration	MS – Middle scale
IM – Source Impact	NS – Neighborhood scale
BL – General/Background	US – Urban scale
WF – Welfare-based	

Site Name	O3	CO	NO2	SO2	VOC	PM2.5	PM10
Branch Center Rd #2							RC/NS
Elk Grove-Bruceville Rd	RC/NS		RC/NS		BL/NS	BL/NS	
Del Paso Manor	HC/NS	RC/NS	RC/NS	HC/NS	HC/NS	HC/NS	RC/NS
El Camino Watt		HC/MI					
Folsom – 50 Natoma	HC/NS		HC/NS		RC/NS	RC/NS	
Goldenland Ct.	RC/NS	RC/NS	HC/NS		HC/NS		RC/NS
North Highlands	RC/NS	RC/NS	RC/NS	RC/NS			RC/NS
Stockton Blvd						RC/NS	RC/NS
Sloughhouse Rd	RC/NS						
T Street	RC/US		RC/MS			RC/NS	HC/NS

3.0 Minimum Monitoring Requirements

Sacramento County is within the Sacramento-Arden Arcade-Roseville MSA as discussed in Section 2.0. The minimum number of monitors for each pollutant is based on the MSA population as described in 40 CFR 58 Appendix D. The Sacramento-Arden Arcade-Roseville MSA has a population of 2.1 million. The monitoring network within the MSA exceeds the minimum monitoring requirements for all criteria pollutants. Details are provided below in Tables 4, 5, 6, and 7.

Ozone

Table 4. Minimum Monitoring Requirements for Ozone

MSA	8-hour Design Value (years)	Min. # Monitors Required	# Monitors Active	Monitors Needed
Sacramento-Arden Arcade-Roseville	0.102 ppm (2006-2008)	2	15 total 7 within Sacramento County	0

PM2.5

Table 5. Minimum Monitoring Requirements for PM-2.5

MSA	Type of Design Value (years)	Min. # Monitors Required	# Monitors Active	Monitors Needed
Sacramento-Arden Arcade-Roseville	Annual DV: 12.9μg/m^3 (2006-2008) 24-hr DV: 56μg/m^3 (2006-2008)	3 FRM	5 FRM 3 within Sacramento County	0
		2 Continuous	9 Continuous 4 within Sacramento County	0

PM10

Table 6. Minimum Monitoring Requirements for PM-10

MSA	Exceedance-Based Design Value (years)	Min. # Monitors Required	# Monitors Active	Monitors Needed
Sacramento-Arden Arcade-Roseville	0.0 expected exceedance days (2006-2008) 2008 - 97μg/m^3 2007 - 56μg/m^3 2006 - 65μg/m^3	2-4	10 SSI 6 within Sacramento County	0

NO2

Table 7. Minimum Monitoring Requirements for NO2

MSA	Design Value (years)	Min. # Monitors Required	# Monitors Active	Monitors Needed
Sacramento-Arden Arcade-Roseville	.0127 ppm (2007-2008)	2* NO2 and 2** near roadway NO2	8 6 within Sacramento County	N/A

*** Monitors Required for PAMS: 2 NO_2 (one at each Type II), 1 NO_Y at either the Type I or III site.**

**** Two near roadway NO2 monitors will be required in this MSA, by January 1, 2013. The District will be required to identify the locations of the two near roadway monitoring sites in the 2011 Annual Monitoring Network Plan, due to EPA, no later than July 1, 2011.**

SO2

Table 8. Minimum Monitoring Requirements for SO2

MSA	Annual Mean Design Value (years)	Min. # Monitors Required	# Monitors Active	Monitors Needed
Sacramento-Arden Arcade-Roseville	.0011 ppm (2007-2008)	N/A	2 2 within Sacramento County	N/A

CO

Table 9. Minimum Monitoring Requirements for CO

MSA	Type of Design Value (years)	Min. # Monitors Required	# Monitors Active	Monitors Needed
Sacramento-Arden Arcade-Roseville	8-hr: 4.1 ppm (2007-2008) 1-hr: 5.8 ppm (2007-2008)	N/A	4 4 within Sacramento County	N/A

Monitors Required for SIP or Maintenance Plan: 1 CO monitor

Pb

Table 10. Minimum Monitoring Requirements for Pb

MSA	Daily Design Value (years)	Min. # Monitors Required	# Monitors Active	Monitors Needed
Sacramento-Arden Arcade-Roseville	N/A	1*	None	1

*** Due to the revised NAAQS for Pb, this MSA (>= 500,000 population) will be required to have, at least, 1 non-source orientated, neighborhood scale Pb monitoring site to measure Pb concentrations in urban areas, by January 1, 2011. The planned Pb monitoring site must be described in the Annual Monitoring Plan, due to EPA, no later than July 1, 2010.**

4.0 Recent or Proposed Modifications to the Network

The 2008 revised Pb NAAQS is under review. Once it is finalized, the District will work to meet the monitoring requirements as promulgated in the final ruling. A low volume Pb-PM10 sampler will be installed, at our Sacramento NCore monitoring site, to satisfy the population-based lead monitoring requirement as listed in the Proposed Revisions to Pb Ambient Air Monitoring Requirements (December 2009, Docket ID No. EPA-HQ-OAR-2006-0735).

Pb-PM10 data may be used to show only non-attainment or unclassified status. Pb-TSP data may be used to show attainment or non-attainment status.

As per 40 CFR 58, Appendix C, Section 2.10.2, (1) the District will install and operate a Pb-TSP sampler at Sacramento-Del Paso Manor within six months, if the maximum Pb-PM10 three-month arithmetic mean concentration is greater than or equal to 0.10 ug/m3; (2) the District may cease operation of the Pb-PM10 sampler when the Pb-TSP sampler becomes operational.

Folsom-Natoma

The District is evaluating adding a CO monitor to this site (see discussion under El Camino/Watt). The CO monitor would be used to evaluate ozone model performance and potentially compliance with the new NAAQS due to be finalized in October 2011.

Del Paso Manor

EPA has approved, Sacramento- Del Paso Manor, as the future NCore monitoring site, for this MSA. Thus, the District will install a NO_y analyzer, SO_2 trace level analyzer, a low volume PM_{10} FRM sampler, and a low volume Pb-PM10 at this site, during 2010. The low volume PM_{10} FRM sampler is needed for the PM10-2.5 (coarse) monitoring, which is mandatory at all NCore sites. The NCore, Pb, and PM10-2.5 monitoring will begin, no later than January 1, 2011.

The primary reason why we plan to operate a Pb-PM10 sampler, instead of a Pb-TSP sampler, at the NCore site, is that a low volume Pb-PM10 sampler will require up less rooftop space, then a high volume Pb-TSP sampler. The amount of available rooftop space is limited. Thus, we wish to effectively manage the limited amount of rooftop space available, so that we may accomplish our monitoring objectives, using the least amount of rooftop space, if possible. The secondary reason why we plan to operate a Pb-PM10 is that the historical 1996-1998 Stockton Blvd and El Camino/Watt Pb-TSP data and the lack of large Pb emission point/area sources suggest that ambient Pb-TSP concentration levels, in this area, would be approximately <= 1/10 of the revised Federal Health Standard for Pb.

In previous editions of this Annual Network Plan, we stated that we were "evaluating shutting down the PM-10 TEOM monitor at this site since TEOM data is not usable for forecasting or analysis due to negative bias during the winter time when there is wood combustion. Termination of the TEOM will free up instrument rack space for NCore instruments." Currently, the District is evaluating relocating the PM-10 TEOM from Del Paso Manor to Goldenland Court, to free up instrument rack space, at Del Paso Manor, for NCore instrumentation.

The District is evaluating shutting down the two PM related SPM research instruments: Aethalometer and Nephelometer. Termination of these two SPM instruments will free up rooftop space for NCore instrumentation.

El Camino/Watt

The District is evaluating shutting down this site. It was originally installed because the District was a CO non-attainment area and the previous version of 40 CFR 58 required it. This microscale site is no longer required by regulation. Also, the shelter that houses the CO monitor has dry rot and would be too costly to repair. The CO monitor is proposed to be re-located to Folsom- Natoma to be used for verifying ozone model performance.

Stockton Blvd

The District is evaluating the possibility of shutting down the PM-10 SSI, PM-10 TEOM, and PM2.5 FRM at this site. The PM-10 SSI is not required. The TEOM data is not usable for forecasting or analysis due to negative bias during the winter time when there is wood combustion. The PM2.5 FRM is redundant, as it collects the same PM2.5 data as the nearby T St site.

Goldenland Ct

The District is evaluating shutting down the CO monitor at this site. The District is a federal attainment area for CO and this monitor is not required. In addition, the District is evaluating the possibility of shutting down the PM-10 SSI as it is not required.

The District is evaluating relocating the Del Paso Manor PM-10 TEOM to this site, as it would free up instrument rack space and rooftop space for NCore instrumentation, etc.

North Highlands

The District is evaluating shutting down the O_3, CO, NO_2, SO_2, and PM-10 SSI at this site. This site is a redundant air monitoring site and was originally sited to support a proposed power plant project at McClellan AFB. Staff resources used to support this air monitoring site would be used, in the future, to support the new mandatory NCore monitoring program at Del Paso Manor and future NO2 near roadway monitoring sites.

Southern Sacramento County Winter-time PM2.5 Special Purpose Monitoring Study

The District added two additional seasonal PM-2.5 E-BAM's (Special Purpose Monitors) in the southeast quadrant of the District (Sloughhouse and Rancho Seco) during the winter months (November-February) to help support the public notification requirements of the District's Rule 421 – Mandatory Episodic Curtailment of Wood and Other Solid Fuel Burning. This SPM study will be conducted during 2008-2011.

5.0 Process to review changes to PM-2.5 Monitoring Network

40 CFR 58 requires that this Annual Monitoring Plan document how State and Local Agencies provide for the review of changes to a PM-2.5 monitoring network that impact the location of a violating PM-2.5 monitor or the creation/change to a community monitoring zone, including a description of the proposed use of spatial averaging for purposes of making comparisons to the

annual PM-2.5 NAAQS as set forth in Appendix N to Part 58 in 40 CFR 58. The affected State or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

For comparison purposes, the number of PM-2.5 monitors by area and population has been included. The analysis can be found in Appendix A.

The general process for any proposed change to the monitoring network is that the proposed change is discussed in this Annual Monitoring Plan. Then, during spring, each year, this Annual Monitoring Plan will be sent by SMAQMD to CARB/TSD for review and comment. Prior to June 1, each year, this report will be posted to our District Website for no less than 30 days, for public review and comment. During late June, each year, the finalized Annual Monitoring Plan and comments on the Plan will be forwarded to EPA-Region IX, prior to the July 1 deadline.

6.0 Data Submission Requirements

- 2009 Precision/Accuracy reports submitted to AQS: Spring 2010
- 2009 Annual data certification submitted: June 2010 (by CARB)

7.0 Review of existing SMAQMD/CARB Air Monitoring Sites

For each monitor at each monitoring site, the tables in Appendix B were used to determine if each monitor meets 40 CFR 58 requirements, including Appendix A (QA Requirements), C (FRM/FEM/ARM Requirements), D (Network Design Criteria), and E (Probe Sitting Criteria), when applicable. The SMAQMD ambient air monitoring network meets the requirements of 40 CFR 58 including Appendix A, C, D, and E.

(For site photos, site surveys, and site location maps, please refer to California Air Resources Board Website at http://www.arb.ca.gov/qaweb/site.php)

8.0 Bibliography

Air Monitoring Quality Assurance: Volume II, California Air Resources Board/Monitoring and Laboratory Division, Sacramento, CA, February 2000.

Air Monitoring Site List (Site Surveys), California Air Resources Board/Monitoring and Laboratory Division Web Site (www.arb.ca.gov)

Air Quality Data Summaries, California Air Resources Board/Planning and Technical Services Division Web Site (www.arb.ca.gov)

CRPAQS Initial Data Analysis of Field Program Measurements (Draft Final Report), Desert Research Institute, Reno, NV, July 29, 2005

Federal Register, 40 CFR Parts 53 and 58, October 17, 2006

SI 473 Course, Introduction to Environmental Statistics, Air Pollution Training Institute, US Environmental Protection Agency.

SMAQMD Air Monitoring Network Review, Sacramento Metropolitan AQMD/Program Coordination Division, August 15, 2005

State and Local Air Monitoring Network Plan, California Air Resources Board/Planning and Technical Support Division, Sacramento, CA, June 2008.

APPENDIX A

Comparison of Number of PM2.5 Monitors by Area and Population

The Sacramento MSA has a total of 16 PM2.5 monitors: 5 FRM, 9 BAM, and 2 SASS monitor. 8 of the 16 PM2.5 monitors are located in areas of high population density to monitor for population exposure.

To illustrate how the Sacramento MSA compares to other air districts in terms of monitoring PM2.5, a comparison of the number of PM2.5 monitors by geographic area and population in several air districts in California is shown in the table below.

Table A-1: Comparison of Number of PM2.5 Monitors in Several Air Basins

District	Square Miles	Population (millions)	Number of PM-2.5 Monitors	PM-2.5 Monitors per person	PM-2.5 Monitors per square mile
Bay Area	5,340	6.8	20	1 per 340,000	1 per 267
Sacramento MSA	5,309	2.1	16	1 per 131,350	1 per 332
South Coast	15,000	16.5	33	1 per 500,000	1 per 455
San Joaquin Valley	25,000	3.9	26	1 per 150,000	1 per 962

The numbers of PM2.5 monitors per person show that the Sacramento MSA has a higher than average number of monitors per person. The numbers of PM2.5 monitors per square mile show that the Sacramento MSA has a higher than average number of monitors per square mile.

However, caution should be used when doing these types of comparisons, as these four Districts have different ratios of urbanized area vs. rural areas and rural vs. urban population, etc. For example, Bay Area has a similar size (number of square miles) compared to the Sacramento MSA, but Bay Area has a higher population density per square mile, in the urbanized areas. San Joaquin Valley has a highest amount of area, more rural population, and lowest population density per square mile. In addition, San Joaquin Valley has the typical PM2.5 sources of motor vehicles and residential wood combustion, but it also has agricultural sources of PM2.5. Thus, the size of a monitoring network is largely determined by the number of monitors needed to satisfy the local/regional monitoring needs, depending upon the unique features and needs of that District.

APPENDIX B

Current Detailed Site Information

B.1 Sacramento- Branch Center #2

Sacramento- Branch Center #2 is a PM-10 SSI site. This site was established, in early 2006, to replace the former Sacramento- Branch Center site. The purpose of this site is to monitor for PM-10 emissions from nearby aggregate operations.

Site Name	Branch Center #2	
AQS Site No.	06-067-0284	
Geographic Coordinates	N 38 deg 33 min 5 sec, W 121 deg 20 min 12 sec	
Location	Rooftop of building in middle of County Maintenance Yard. Located about 10 miles east-southeast of downtown Sacramento.	
Address	3847 Branch Center Road, Sacramento, CA 95827	
County	Sacramento	
Distance from roadway (meters)	40	
Average Daily Traffic	23,400 Vehicles/Day	
Ground Cover	Paved	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	PM_{10} SSI	
Monitoring Objective	RC	
Spatial Scale of Representativeness	Neighborhood	
Sampling Method	Hi-Volume/Size Selective Inlet	
Analysis Method	Gravimetric	
Make/Model	Sierra Anderson 1200	
Start Date	4/2006	
Operating Schedule	1:6	
Sample Season	January-December	
Probe Height (meters, agl)	6.2 m	
Statement of purpose of monitor	Measure representative concentrations of PM-10. This site has the highest annual average for PM_{10} in Sacramento County	
Site Type (i.e., SLAMS, PAMS)	SLAMS	
Distance from Supporting Structure	1.7 m	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	N/A	
Distance from trees	30 m	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	N/A	
Residence Time	N/A	
Any changes in the next 18 months?	No	
Suitable for comparison to Annual PM2.5 NAAQS	N/A	
Frequency of flow rate verification for manual PM samplers audit	Monthly	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	
Last two semi-annual flow rate audits for PM monitors	Date: 2/20/09 (EPA), 8/31/09 (CARB)	

B.2 Elk Grove- Bruceville

The Bruceville air monitoring site has been existence since 1992. It is the upwind O_3 and ozone precursor monitoring site for our network.

The Bruceville air monitoring site replaced the former Sacramento-Meadowview Rd. O_3 monitoring site.

The Bruceville site measures O_3, NO_2, total NMHC, speciated VOC (episodic only), PM-2.5 BAM, WD, WS, TMP, RH, SRD, UV Radiation, Precipitation, and Atmospheric pressure

The Bruceville air monitoring site is a PAMS Type 1 site.

Adjacent to the air monitoring site is our Franklin Field- Radar Wind Profiler for measurement of Upper level winds and temperature. This Wind profiler is operated year-round. Collection of upper air data is a requirement for the PAMS program.

Site Name	Elk Grove- Bruceville	
AQS Site No.	06-067-0011	
Geographic Coordinates	N 38 deg 18 min 9 sec, W 121 deg 25 min 15 sec	
Location	Agricultural area located about 7 miles southwest of Elk Grove, CA.	
Address	12490 Bruceville Rd, Elk Grove, CA 95758	
County	Sacramento	
Distance from roadway (meters)	76	
Average Daily Traffic	500 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	Nitrogen Dioxide
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	UV Absorption	Chemiluminesence
Analysis Method	Machine average	Machine average
Make/Model	API 400	TECO 42I
Start Date	7/1992	7/1992
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	4.4	4.4
Statement of purpose of monitor	Measure background ozone concentrations at upwind site during summer season (PAMS Type 1 site)	Measure background concentrations of ozone precursors during summer O3 season at Type 1 site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 1 site)	SLAMS (PAMS Type 1 site)
Distance from Supporting Structure	1.3 m	1.3 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	11 seconds	13 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 9/2/09	Date: 9/2/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Elk Grove- Bruceville	
AQS Site No.	06-067-0011	
Geographic Coordinates	N 38 deg 18 min 9 sec, W 121 deg 25 min 15 sec	
Location	Agricultural area located about 7 miles southwest of Elk Grove, CA.	
Address	12490 Bruceville Rd, Elk Grove, CA 95758	
County	Sacramento	
Distance from roadway (meters)	76	
Average Daily Traffic	500 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Total NMHC	Speciated VOC
Monitoring Objective	BL	BL
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	GC	Summa Canister
Analysis Method	FID	GC/FID
Make/Model	TECO 55C	Xontech 910A/912
Start Date	7/1996	7/1996
Operating Schedule	Daily	1:3
Sample Season	January-December	July-September
Probe Height (meters, agl)	4.4	5.1
Statement of purpose of monitor	Measure background concentration of ozone precursors	Measure ozone precursors at upwind site during summer ozone season at PAMS Type 1 site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 1 site)	SLAMS (PAMS Type 1 site)
Distance from Supporting Structure	1.3 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	Stainless Steel
Residence Time	16 seconds	2 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: N/A	Date: N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Elk Grove- Bruceville	
AQS Site No.	06-067-0011	
Geographic Coordinates	N 38 deg 18 min 9 sec, W 121 deg 25 min 15 sec	
Location	Agricultural area located about 7 miles southwest of Elk Grove, CA.	
Address	12490 Bruceville Rd, Elk Grove, CA 95758	
County	Sacramento	
Distance from roadway (meters)	76	
Average Daily Traffic	500 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	BAM $PM_{2.5}$	Ambient Temperature
Monitoring Objective	BL	N/A
Spatial Scale of Representativeness	Neighborhood	N/A
Sampling Method	Low Volume/Very Sharp Cut Cyclone	Thermistor
Analysis Method	Beta Attenuation	Machine Average
Make/Model	Met One 1020 BAM	Climatronics 100093
Start Date	12/2000	8/1996
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	4.3	10
Statement of purpose of monitor	Installed in 2000 to measure background concentrations and transport of PM2.5 from SJV. Data used for PM2.5 forecasting.	Measure representative meteorology at PAMS Type 1 (upwind) site
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS (PAMS Type 1 site)
Distance from Supporting Structure	1.5 m	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	Bi-monthly	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 2/20/09 (EPA), 9/2/09 (CARB)	N/A

Site Name	Elk Grove- Bruceville	
AQS Site No.	06-067-0011	
Geographic Coordinates	N 38 deg 18 min 9 sec, W 121 deg 25 min 15 sec	
Location	Agricultural area located about 7 miles southwest of Elk Grove, CA.	
Address	12490 Bruceville Rd, Elk Grove, CA 95758	
County	Sacramento	
Distance from roadway (meters)	76	
Average Daily Traffic	500 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Wind Direction	Wind Speed
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Wind Vane	Anemometer
Analysis Method	Vector Summation	Vector Summation
Make/Model	Climatronics F460 WD Sensor	Climatronics F-460 WS Sensor
Start Date	8/1996	8/1996
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Measure representative meteorology at the PAMS Type 1 site (upwind site)	Measure representative meteorology at PAMS Type 1 (upwind) site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 1 site)	SLAMS (PAMS Type 1 site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Elk Grove- Bruceville	
AQS Site No.	06-067-0011	
Geographic Coordinates	N 38 deg 18 min 9 sec, W 121 deg 25 min 15 sec	
Location	Agricultural area located about 7 miles southwest of Elk Grove, CA.	
Address	12490 Bruceville Rd, Elk Grove, CA 95758	
County	Sacramento	
Distance from roadway (meters)	76	
Average Daily Traffic	500 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Relative Humidity	Barometric Pressure
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Hygroscopic Plastic Film	Barometric sensor
Analysis Method	Machine Average	Machine Average
Make/Model	Climatronics 101669	Climatronics 101448
Start Date	8/1996	7/1997
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	2
Statement of purpose of monitor	Measure representative meteorology at PAMS Type 1 Site	Measure representative meteorology, as per PAMS requirements
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 1 site)	SLAMS (PAMS Type 1 site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Elk Grove- Bruceville	
AQS Site No.	06-067-0011	
Geographic Coordinates	N 38 deg 18 min 9 sec, W 121 deg 25 min 15 sec	
Location	Agricultural area located about 7 miles southwest of Elk Grove, CA.	
Address	12490 Bruceville Rd, Elk Grove, CA 95758	
County	Sacramento	
Distance from roadway (meters)	76	
Average Daily Traffic	500 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Precipitation	UV Radiation
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Tipping Bucket	Pyranometer
Analysis Method	Machine Average	Machine Average
Make/Model	Climatronics 100508	Climatronics 100TUVR
Start Date	8/1997	8/1997
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	3	10
Statement of purpose of monitor	Measure representative meteorology, as per PAMS requirements	Measure representative meteorology as per PAMS requirements
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 1 site)	SLAMS (PAMS 1 site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Elk Grove- Bruceville	
AQS Site No.	06-067-0011	
Geographic Coordinates	N 38 deg 18 min 9 sec, W 121 deg 25 min 15 sec	
Location	Agricultural area located about 7 miles southwest of Elk Grove, CA.	
Address	12490 Bruceville Rd, Elk Grove, CA 95758	
County	Sacramento	
Distance from roadway (meters)	76	
Average Daily Traffic	500 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Solar Radiation	Upper Level Wind Direction and Wind Speed and Virtual Temp
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Pyranometer	915 MHz Radar Wind Profiler, with RASS
Analysis Method	Machine Average	Doppler radar
Make/Model	Climatronics 100848	Radian LAP-3000 with RASS option
Start Date	8/1996	6/1996
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	N/A
Statement of purpose of monitor	Measure representative meteorology at PAMS Type 1 site	Measure representative upper level meteorology at PAMS Type 1 site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 1 site)	SLAMS (PAMS Type 1 site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	20 m	N/A
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

B.3 Sacramento- Del Paso Manor

This site has been in existence since 1979. This air monitoring site is the largest air monitoring site in the Sacramento Valley air basin. This site may be one of the largest air monitoring sites in Northern California, in terms of number of parameters measured.

It measures O_3, CO, NO_2, SO_2, NMHC, speciated VOC (C2-C12), Carbonyl, PM-10 (SSI- main and collocated), PM-10 TEOM, PM-2.5 FRM (main and collocated), PM-2.5 BAM, Speciated PM-2.5 (SASS), Black Carbon (Aethalometer), Scattering Coefficient (Nephelometer), WD-resultant, WS-resultant, ambient temperature, relative humidity, and total solar radiation.

This site is a PAMS Type 2 primary site and a PM-2.5 Speciation Trend Network (STN) site. This site is the current PM-2.5 design value site for this MSA.

In October 2009, EPA- Region IX approved this monitoring site as an NCore site. This is one of six NCore sites proposed for California. The District plans to operate an NCore site at Del Paso Manor, no later than January 1, 2011.

To accommodate the NCore monitoring instrumentation, the District will expand the size of the existing roof deck, add a 10 meter NOY converter tower, and upgrade the electrical capacity in Spring 2010.

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood Park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	Carbon Monoxide
Monitoring Objective	HC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	UV Absorption	NDIR
Analysis Method	Machine average	Machine average
Make/Model	API 400	TECO 48C
Start Date	12/1979	12/1979
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measure elevated summertime ozone levels near the downwind edge of the central business district (PAMS Type II primary site)	Measure representative wintertime CO concentrations in an area of high population density
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 primary site)	SLAMS
Distance from Supporting Structure	2.0 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	7 seconds	12 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 7/1/09	Date: 7/1/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood Park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Nitrogen Dioxide	Sulfur Dioxide
Monitoring Objective	RC	HC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Chemiluminescence	UV Fluorescence
Analysis Method	Machine average	Machine average
Make/Model	TECO 42C	TECO 43C
Start Date	12/1979	12/1979+
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measuring summertime ozone precursor emissions near downwind edge of central business district	Measure representative concentrations in area of high population density
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type II primary site)	SLAMS
Distance from Supporting Structure	2.0 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	8 seconds	16 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 7/1/09	Date: 7/1/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	NMHC	Speciated VOC (C2-C12)
Monitoring Objective	HC	HC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	GC-FID	Evacuated 6 liter Summa Canister
Analysis Method	Machine average	GC/PDFID (EPA T.O.-14)
Make/Model	TECO 55C	Xontech 910A/912
Start Date	8/1994	8/1994
Operating Schedule	Daily	1:3
Sample Season	January-December	July-September
Probe Height (meters, agl)	5.3	5.4
Statement of purpose of monitor	Measure summertime ozone precursors (HC) near downwind edge of the central business district (PAMS Type 2 primary site)	Measure summertime VOC near downwind edge of central business district (PAMS Type 2 primary site)
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 primary site)	SLAMS (PAMS Type 2 primary site)
Distance from Supporting Structure	2.0 m	2.1 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	Stainless Steel
Residence Time	12 seconds	3 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	N/A
Last Annual Performance Evaluation (gaseous)	Date: 12/8/09 (SMAQMD)	Date: N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Carbonyl	PM-10 SSI: Main sampler
Monitoring Objective	HC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	DNPH-Silica Gel Cartridge	Hi-Volume/Size Selective Inlet
Analysis Method	HPLC	Gravimetric
Make/Model	Xontech 925	Sierra-Anderson 1200
Start Date	8/1996	1/1986
Operating Schedule	1:3	1:6
Sample Season	July-September	January-December
Probe Height (meters, agl)	5.4	5.0
Statement of purpose of monitor	Measure summertime VOC (carbonyl) near downwind edge of central business district (PAMS Type 2 primary site)	Measure wintertime elevated PM-10 from motor vehicles and residential wood combustion
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 primary site)	SLAMS
Distance from Supporting Structure	2.1 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	2.0 m
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	Stainless Steel	N/A
Residence Time	3 seconds	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	Monthly
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	Date: 2/19/09 (EPA), 6/29/09 (CARB)

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood Park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	PM_{10} SSI: Collocated sampler	PM_{10} TEOM
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Hi-Volume/Size Selective Inlet	Low Volume
Analysis Method	Gravimetric	TEOM
Make/Model	Sierra-Anderson 1200	R & P 1400
Start Date	1/1986	11/1993
Operating Schedule	1:6	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.0	5.0
Statement of purpose of monitor	Collocated PM-10 SSI sampler for collection of precision data	Measure diurnal profile of wintertime elevated PM-10 from motor vehicles and residential wood smoke
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS
Distance from Supporting Structure	2.0 m	1.8 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	2.0 m	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	Stainless Steel
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	Yes
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	Monthly	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	Bi-monthly
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 2/19/09 (EPA), 6/29/09 (CARB)	Date: 2/19/09 (EPA), 6/29/09 (CARB)

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood Park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	$PM_{2.5}$ Main FRM Sampler	$PM_{2.5}$ Collocated FRM Sampler
Monitoring Objective	HC	HC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Low volume/Very Sharp Cut Cyclone	Low volume/Very Sharp Cut Cyclone
Analysis Method	Gravimetric	Gravimetric
Make/Model	R & P 2025	R & P 2025
Start Date	1/1999	2/1999
Operating Schedule	1:3.	1:12
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.0	5.0
Statement of purpose of monitor	Measure elevated wintertime PM2.5 from motor vehicles and residential wood combustion	Collocated PM2.5 FRM sampler for collection of precision data
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS
Distance from Supporting Structure	2.0 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	2.0 m	2.0 m
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	Yes, suitable for comparison to Annual PM2.5 NAAQS	Yes, suitable for comparison to Annual PM2.5 NAAQS
Frequency of flow rate verification for manual PM samplers audit	Monthly	Monthly
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 2/19/09 (EPA), 6/29/09 (CARB)	Date: 2/19/09 (EPA), 6/29/09 (CARB)

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	BAM-$PM_{2.5}$	Speciated PM2.5
Monitoring Objective	HC	HC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Low Volume/Very Sharp Cut Cyclone	SASS
Analysis Method	Beta Attenuation	XRF/IC
Make/Model	Met One 1020	Met One SASS
Start Date	5/2000	2/2000
Operating Schedule	Daily	1:3
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.2
Statement of purpose of monitor	Measure elevated wintertime PM2.5 from motor vehicles and residential wood combustion	Collect elevated wintertime PM2.5 emissions from motor vehicles and residential wood combustion
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS (STN site)
Distance from Supporting Structure	2.0 m	1.9 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	Stainless Steel	N/A
Residence Time	5 seconds	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	Monthly
Frequency of flow rate verification for automated PM analyzers audit	Bi-monthly	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 2/19/09 (EPA), 6/29/09 (CARB)	Date: 4/27/09, 9/15/09 (SMAQMD)

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Organic and elemental carbon	
Monitoring Objective	HC	
Spatial Scale of Representativeness	Neighborhood	
Sampling Method	Quartz filter and Cyclone Inlet	
Analysis Method	IMPROVE_A TOR	
Make/Model	URG 3000N	
Start Date	4/2009	
Operating Schedule	1:3	
Sample Season	January-December	
Probe Height (meters, agl)	5.2	
Statement of purpose of monitor	Collect elevated wintertime PM2.5 emissions from motor vehicles and residential wood combustion	
Site Type (i.e., SLAMS, PAMS)	SLAMS (STN site)	
Distance from Supporting Structure	1.9 m	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	N/A	
Distance from trees	22 m	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	N/A	
Residence Time	N/A	
Any changes in the next 18 months?	No	
Suitable for comparison to Annual PM2.5 NAAQS	N/A	
Frequency of flow rate verification for manual PM samplers audit	Monthly	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Black Carbon	Scattering Coefficient
Monitoring Objective	NA	NA
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Light Absorption	Light Scattering
Analysis Method	Aethalometer	Nephelometer
Make/Model	Anderson RTAA 800	Radiance Research M903
Start Date	12/2001	12/2001
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.1	4.5
Statement of purpose of monitor	Installed for Winter 1999-2000 CRPAQS study. Instrument was not removed after end of special study.	Installed for winter 1999-2000 CRPAQS study. Instrument was not removed after end of special study.
Site Type (i.e., SLAMS, PAMS)	SPM	SPM
Distance from Supporting Structure	1.8 m	1.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	Aluminum	PVC Plastic
Residence Time	1 second	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	Monthly	Monthly
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood Park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Wind Direction	Wind Speed
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Wind Vane	Wind Cups
Analysis Method	Vector Summation	Vector Summation
Make/Model	Climatronics F460 WD sensor	Climatronics F-460 WS sensor
Start Date	8/1994	8/1994
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Measure wind direction data at PAMS Type 2 site	Measure representative wind speeds at PAMS Type 2 site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 primary site)	SLAMS (PAMS Type 2 primary site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood Park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ambient Temperature	Relative Humidity
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Thermistor	Hygroscopic plastic film
Analysis Method	Machine Average	Machine Average
Make/Model	Climatronics 100093	Climatronic 101669
Start Date	8/1994	8/1994
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Measure representative meteorology at PAMS Type 2 site	Measure representative meteorology at PAMS Type 2 site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 primary site)	SLAMS (PAMS Type 2 primary site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-Del Paso Manor	
AQS Site No.	06-067-0006	
Geographic Coordinates	N 38 deg 36 min 50 sec, W 121 deg 22 min 5 sec	
Location	Neighborhood park located about 7 miles east-northeast of downtown Sacramento.	
Address	2701 Avalon Drive, Sacramento, CA 95821	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Total Solar Radiation	
Monitoring Objective	N/A	
Spatial Scale of Representativeness	N/A	
Sampling Method	Pyranometer	
Analysis Method	Machine Average	
Make/Model	Climatronics 100848	
Start Date	9/1994	
Operating Schedule	Daily	
Sample Season	January-December	
Probe Height (meters, agl)	10	
Statement of purpose of monitor	Measure solar radiation at PAMS Type 2 site	
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 site)	
Distance from Supporting Structure	N/A	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	N/A	
Distance from trees	22 m	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	N/A	
Residence Time	N/A	
Any changes in the next 18 months?	No	
Suitable for comparison to Annual PM2.5 NAAQS	N/A	
Frequency of flow rate verification for manual PM samplers audit	N/A	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	

B.4 Sacramento- El Camino/Watt

Sacramento- El Camino/Watt has been in existence since 1981. This site is a micro-scale CO monitoring station.

Site Name	Sacramento- El Camino/Watt	
AQS Site No.	06-067-0007	
Geographic Coordinates	N 38 deg 36 min 37 sec, W 121 deg 22 min 56 sec	
Location	Shopping Center located about 6.5 miles east-northeast of downtown Sacramento.	
Address	3535 El Camino Avenue, Sacramento, CA 95825	
County	Sacramento	
Distance from roadway	2 meters	
Average Daily Traffic	30,000 Vehicles/Day	
Ground Cover	Paved	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Carbon Monoxide	
Monitoring Objective	HC	
Spatial Scale of Representativeness	Micro-scale	
Sampling Method	NDIR	
Analysis Method	Machine Average	
Make/Model	TECO 48C	
Start Date	11/2001	
Operating Schedule	Daily	
Sample Season	January-December	
Probe Height (meters, agl)	3.0	
Statement of purpose of monitor	Measure highest concentrations (wintertime CO levels near a traffic intersection)	
Site Type (i.e., SLAMS, PAMS)	SLAMS	
Distance from Supporting Structure	1.1 m	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	4 m	
Distance from trees	N/A	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	FEP Teflon	
Residence Time	16 seconds	
Any changes in the next 18 months?	Yes	
Suitable for comparison to Annual PM2.5 NAAQS	N/A	
Frequency of flow rate verification for manual PM samplers audit	N/A	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	Every other day	
Last Annual Performance Evaluation (gaseous)	Date: 10/7/09	
Last two semi-annual flow rate audits for PM monitors	N/A	

B.5 Goldenland Court

This site replaces the former Airport Rd. monitoring site. This PAMS Type II (secondary) site began monitoring approximately October 2008.

This site measures O3, CO, NO2, Total NMHC, PM10, WD, WS, Temp, rh, and SRD.

Site Name	Goldenland Court	
AQS Site No.	06-067-0014	
Geographic Coordinates	N 38 deg 39 min 2.45 sec ,W 121 deg 30 min 23.74 sec	
Location	Site located about 5 miles north of downtown Sacramento, in a residential/commercial area.	
Address	68 Goldenland Court, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway	120 meters	
Average Daily Traffic	20,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	Carbon Monoxide
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	UV Absorption	NDIR
Analysis Method	Machine Average	Machine Average
Make/Model	API 400	TECO 48 CO Analyzer
Start Date	10/2008	10/2008
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measure ozone near downwind edge of Central Business District during summer ozone season (PAMS Type 2- secondary site)	Measure representative concentrations
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2-secondary site)	SLAMS
Distance from Supporting Structure	1.9 m	1.9 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	17 Seconds	15 Seconds
Any changes in the next 18 months?	No	Yes
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 5/19/09	Date: 5/19/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Goldenland Court	
AQS Site No.	06-067-0014	
Geographic Coordinates	N 38 deg 39 min 2.45 sec ,W 121 deg 30 min 23.74 sec	
Location	Site located about 5 miles north of downtown Sacramento, in a residential/commercial area.	
Address	68 Goldenland Court, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway	120 meters	
Average Daily Traffic	20,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Nitrogen Dioxide	Total NMHC
Monitoring Objective	HC	HC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Chemiluminesence	GC
Analysis Method	Machine Average	FID
Make/Model	TECO 42C NO2 Analyzer	TECO 55C Total NMHC Analyzer
Start Date	10/2008	10/2008
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measure ozone precursors near downwind edge of Central Business District during summer O3 season (PAMS Type 2 secondary site)	Measure Total NMHC near downwind edge of Central Business District (PAMS Type 2 secondary site)
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2-secondary site)	SLAMS (PAMS Type 2-secondary site)
Distance from Supporting Structure	1.9 m	1.9 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	17 seconds	17 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 5/19/09	Date: 12/8/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Goldenland Court	
AQS Site No.	06-067-0014	
Geographic Coordinates	N 38 deg 39 min 2.45 sec ,W 121 deg 30 min 23.74 sec	
Location	Site located about 5 miles north of downtown Sacramento, in residential/commercial area.	
Address	68 Goldenland Court, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway	120 meters	
Average Daily Traffic	20,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	PM10-SSI	Ambient Temperature
Monitoring Objective	RC	N/A
Spatial Scale of Representativeness	Neighborhood	N/A
Sampling Method	High Volume/Size Selective Inlet	Thermistor
Analysis Method	Gravimetric	Machine Average
Make/Model	Sierra Anderson 1200	Climatronics 100093
Start Date	10/2008	10/2008
Operating Schedule	1:6	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.4	10
Statement of purpose of monitor	Measure representative concentrations	Measure representative meteorology at PAMS Type 2 secondary site
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS (PAMS Type 2 secondary site)
Distance from Supporting Structure	2.0 m	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	N/A
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	Yes	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	Monthly	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 2/19/09 (EPA), 5/19/09 (CARB)	N/A

Site Name	Goldenland Court	
AQS Site No.	06-067-0014	
Geographic Coordinates	N 38 deg 39 min 2.45 sec ,W 121 deg 30 min 23.74 sec	
Location	Site located about 5 miles north of downtown Sacramento, in residential/commercial area.	
Address	68 Goldenland Court, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway	120 meters	
Average Daily Traffic	20,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Wind Direction	Wind Speed
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Wind Vane	Wind cups
Analysis Method	Vector Summation	Vector Summation
Make/Model	Climatronics F-460 WD sensor	Climatronics F-460 WS sensor
Start Date	10/2008	10/2008
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Measure representative meteorology at the PAMS Type 2 secondary site	Measure representative meteorology at PAMS Type 2 secondary site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 secondary site)	SLAMS (PAMS Type 2 secondary site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Goldenland Court	
AQS Site No.	06-067-0014	
Geographic Coordinates	N 38 deg 39 min 2.45 sec ,W 121 deg 30 min 23.74 sec	
Location	Site located about 5 miles north of downtown Sacramento, in a residential/commercial area.	
Address	68 Goldenland Court, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway	120 meters	
Average Daily Traffic	20,000 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Relative Humidity	Solar Radiation
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Hygroscopic Plastic Film	Pyranometer
Analysis Method	Machine Average	Machine Average
Make/Model	Climatronics 101669	Climatronics 100848
Start Date	10/2008	10/2008
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Measure representative meteorology at PAMS Type 2 secondary site	Measure representative meteorology at PAMS Type 2 secondary site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 secondary site)	N/A
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

B.6 Folsom-Natoma Street

This site has been in existence since 1996. This site replaced the former Folsom- Liedesdoff Street site. The Folsom-Natoma site is the maximum summertime O_3 monitoring site within Sacramento County, for days with the prevailing afternoon southwesterly winds.

This site measures: O_3, NO_2, PM-2.5 BAM, Total NMHC, Speciated VOC, WD, WS, Temp, RH, and SRD.

This site is a PAMS Type 3 site.

Site Name	Folsom-Natoma Street	
AQS Site No.	06-067-0012	
Geographic Coordinates	N 38 deg 41 min 00 sec, W 121 deg 9 min 52 sec	
Location	Folsom City Hall (parking lot), located about 20 miles east-northeast of downtown Sacramento.	
Address	50 Natoma Street, Folsom, CA 95630	
County	Sacramento	
Distance from roadway	183 meters	
Average Daily Traffic	13,100 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	Nitrogen Dioxide
Monitoring Objective	HC	HC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	UV absorption	Chemiluminescence
Analysis Method	Machine average	Machine Average
Make/Model	API 400	TECO 42C
Start Date	7/1996	7/1996
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measure highest summertime ozone levels, within Sacramento County, downwind of Sacramento Central business district, under prevailing afternoon southwesterly winds.	Measure NO2 at downwind elevated O3 conc site (PAMS Type 3 site)
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 3 site)	SLAMS (PAMS Type 3 site)
Distance from Supporting Structure	1.8 m	1.8 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	11 seconds	14 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 9/1/09	Date: 9/1/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Folsom-Natoma Street	
AQS Site No.	06-067-0012	
Geographic Coordinates	N 38 deg 41 min 00 sec, W 121 deg 9 min 52 sec	
Location	Folsom City Hall (parking lot), located about 20 miles east-northeast of downtown Sacramento.	
Address	50 Natoma Street, Folsom, CA 95630	
County	Sacramento	
Distance from roadway	183 meters	
Average Daily Traffic	13,100 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Total NMHC	Speciated VOC
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	GC	Summa Canister
Analysis Method	FID	GC/PDFID
Make/Model	TECO 55C	Xontech 910A/912
Start Date	7/1996	7/1996
Operating Schedule	Daily	1:3
Sample Season	January-December	July-September
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measure Total NMHC (PAMS Type 3 site)	Measure speciated VOC at downwind O3 monitoring site (PAMS Type 3 site)
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 3 site)	SLAMS (PAMS Type 3 site)
Distance from Supporting Structure	1.8 m	1.8 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	Stainless Steel
Residence Time	12 seconds	3 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	N/A
Last Annual Performance Evaluation (gaseous)	Date: 12/9/09 (SMAQMD)	Date: N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Folsom-Natoma Street	
AQS Site No.	06-067-0012	
Geographic Coordinates	N 38 deg 41 min 00 sec, W 121 deg 9 min 52 sec	
Location	Folsom City Hall (parking lot), located about 20 miles east-northeast of downtown Sacramento.	
Address	50 Natoma Street, Folsom, CA 95630	
County	Sacramento	
Distance from roadway	183 meters	
Average Daily Traffic	13,100 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	BAM-$PM_{2.5}$	Wind Direction
Monitoring Objective	RC	N/A
Spatial Scale of Representativeness	Neighborhood	N/A
Sampling Method	Low Volume/Very Sharp Cut Cyclone	Wind Vane
Analysis Method	Beta Attenuation	Vector Summation
Make/Model	Met One 1020 BAM	Climatronics F-460 WD sensor
Start Date	5/2002	7/1996
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	4.3	10
Statement of purpose of monitor	Measure Representative concentrations	Collect representative wind data at the PAMS Type 3 site
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS (PAMS Type 3 site)
Distance from Supporting Structure	1.5 m	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	Bi-monthly	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 2/20/09 (EPA), 9/1/09 (CARB)	N/A

Site Name	Folsom-Natoma Street	
AQS Site No.	06-067-0012	
Geographic Coordinates	N 38 deg 41 min 00 sec, W 121 deg 9 min 52 sec	
Location	Folsom City Hall (parking lot), located about 20 miles east-northeast of downtown Sacramento.	
Address	50 Natoma Street, Folsom, CA 95630	
County	Sacramento	
Distance from roadway	183 meters	
Average Daily Traffic	13,100 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Wind Speed	Ambient Temperature
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Anemometer (Wind Cups)	Thermistor
Analysis Method	Vector Summation	Machine Average
Make/Model	Climatronics F-460 WS sensor	Climatronics 100093
Start Date	7/1996	7/1996
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Collect representative wind data at the PAMS Type 3 site	Collect representative wind data at the PAMS Type 3 site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 3 site)	SLAMS (PAMS Site 3 site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Folsom-Natoma Street	
AQS Site No.	06-067-0012	
Geographic Coordinates	N 38 deg 41 min 00 sec, W 121 deg 9 min 52 sec	
Location	Folsom City Hall parking lot, located about 20 miles east-northeast of downtown Sacramento.	
Address	50 Natoma Street, Folsom, CA 95630	
County	Sacramento	
Distance from roadway	183 meters	
Average Daily Traffic	13,100 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Relative Humidity	Total Solar Radiation
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Hygroscopic Plastic film	Pyranometer
Analysis Method	Machine Average	Machine Average
Make/Model	Climatronics 101669	Climatronics 100848
Start Date	7/1996	7/1996
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Collect representative relative humidity at the PAMS Type 3 site	Collect representative relative humidity at the PAMS Type 3 site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 3 site)	SLAMS (PAMS Type 3 site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

B.7 North Highlands-Blackfoot

North Highlands- Blackfoot has been in existence since 1979. It measures O_3, CO, NO_2, SO_2, and PM-10 SSI.

This site is a Special Purpose Monitoring site for O_3, CO, and NO_2. This site is a SLAMS site for SO_2 and PM-10 SSI.

Site Name	North Highlands-Blackfoot	
AQS Site No.	06-067-0002	
Geographic Coordinates	N 38 deg 42 min 44 sec, W 121 deg 22 min 52 sec	
Location	Residential area located about 11 miles north-northeast of downtown Sacramento.	
Address	7823 Blackfoot Way, Antelope, CA 95843	
County	Sacramento	
Distance from roadway	100 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Paved (to north), vegetated (to south)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	Carbon Monoxide
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	UV Absorption	NDIR
Analysis Method	Machine Average	Machine Average
Make/Model	API 400	TECO 48C
Start Date	12/1979	12/1979
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.0	5.0
Statement of purpose of monitor	Representative concentrations.	Representative concentrations
Site Type (i.e., SLAMS, PAMS)	SLAMS (SO_2,PM_{10}) SPM (O_3,CO,NO_2)	SLAMS (SO_2,PM_{10}) SPM (O_3,CO,NO_2)
Distance from Supporting Structure	2.0 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	10 m	10 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	16 seconds	19 seconds
Any changes in the next 18 months?	Yes	Yes
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 10/13/09	Date: 10/13/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	North Highlands-Blackfoot	
AQS Site No.	06-067-0002	
Geographic Coordinates	N 38 deg 42 min 44 sec, W 121 deg 22 min 52 sec	
Location	Residential area located about 11 miles north-northeast of downtown Sacramento.	
Address	7823 Blackfoot Way, Antelope, CA 95843	
County	Sacramento	
Distance from roadway	100 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Paved (to north), vegetated (to south)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Nitrogen Dioxide	Sulfur Dioxide
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Chemiluminescence	UV Florescence
Analysis Method	Machine Average	Machine Average
Make/Model	TECO 42I	TECO 43C
Start Date	12/1979	12/1979
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.0	5.0
Statement of purpose of monitor	Representative concentrations	Representative concentrations
Site Type (i.e., SLAMS, PAMS)	SLAMS (SO_2,PM_{10}) SPM (O_3,CO,NO_2)	SLAMS (SO_2,PM_{10}) SPM (O_3,CO,NO_2)
Distance from Supporting Structure	2.0 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	10 m	10 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	19 seconds	19 seconds
Any changes in the next 18 months?	Yes	Yes
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	Date: 10/13/09	Date: 10/13/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	North Highlands-Blackfoot	
AQS Site No.	06-067-0002	
Geographic Coordinates	N 38 deg 42 min 44 sec, W 121 deg 22 min 52 sec	
Location	Residential area located about 11 miles north-northeast of downtown Sacramento.	
Address	7823 Blackfoot Way, Antelope, CA 95843	
County	Sacramento	
Distance from roadway	100 meters	
Average Daily Traffic	1,000 Vehicles/Day	
Ground Cover	Paved (to north), Vegetated (to south)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	PM_{10} SSI	
Monitoring Objective	RC	
Spatial Scale of Representativeness	Neighborhood	
Sampling Method	High Volume/Size Selective Inlet	
Analysis Method	Gravimetric	
Make/Model	Sierra Anderson 1200	
Start Date	1/1989	
Operating Schedule	1:6	
Sample Season	January-December	
Probe Height (meters, agl)	5.0	
Statement of purpose of monitor	Representative concentrations	
Site Type (i.e., SLAMS, PAMS)	SLAMS (SO_2,PM_{10}), SPM (O_3,CO,NO_2)	
Distance from Supporting Structure	2.0	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	N/A	
Distance from trees	10 m	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	N/A	
Residence Time	N/A	
Any changes in the next 18 months?	Yes	
Suitable for comparison to Annual PM2.5 NAAQS	N/A	
Frequency of flow rate verification for manual PM samplers audit	Monthly	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	
Last two semi-annual flow rate audits for PM monitors	Date: Date: 2/19/09 (EPA), 10/13/09 (CARB)	

B.8 Sloughhouse

The Sloughhouse seasonal (April-October) O_3 monitoring site was established in 1997, to measure elevated afternoon O_3 concentrations, under northwesterly winds, in support of the District's summer O_3 Spare the Air program. This special purpose monitoring site measures O_3, Wind Direction, and Wind Speed.

Northwest wind conditions arise when the prevailing southwesterly summer daytime sea breeze becomes weak or non-existent and the daytime wind flow becomes a northwesterly wind.

Most of our O_3 exceedances occur under southwesterly winds. Thus, most of the daily O_3 peaks would occur at Cool, CA or Folsom, CA. If O_3 exceedances occur under northwesterly winds, then the daily O_3 peak tends to occur at Sloughhouse.

Beginning November 2008, seasonal winter monitoring for PM2.5 was conducted at this site. PM2.5 data will be collected from November-March, during 2009-2011, in support of the South Sacramento County PM2.5 study.

The drip line of a nearby tree, within 10 meters of the O_3 inlet, means that this SPM O_3 site does not satisfy Appendix E probe sitting criteria. However, as per 40 CFR 58, "Appendix E adherence is optional for SPM stations."

Site Name	Sloughhouse-7520 Sloughhouse Rd	
AQS Site No.	06-067-5003	
Geographic Coordinates	N 38 deg 29 min 40 sec, W 121 deg 12 min 40 sec	
Location	Fire Station in rural area located about 16.5 miles east-southeast of downtown Sacramento.	
Address	7520 Sloughhouse Road, Sloughhouse, CA 95683	
County	Sacramento	
Distance from roadway	27 meters	
Average Daily Traffic	200 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	PM2.5
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	N/A
Sampling Method	UV Absorption	Low Volume/Very Sharp Cut Cyclone
Analysis Method	Machine Average	Beta Attenuation
Make/Model	API 400	Met One E-BAM
Start Date	7/1997	11/2008
Operating Schedule	Daily	Daily
Sample Season	April-October	Nov-March
Probe Height (meters, agl)	4.6	2.0
Statement of purpose of monitor	Measure elevated O3 concentration under northwesterly winds, during summer O3 season.	Measure rural PM2.5 concentrations, during winter season.
Site Type (i.e., SLAMS, PAMS)	SPM	SPM
Distance from Supporting Structure	1.8 m	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	6 m	N/A
Distance from trees	Tree is about 6 m, southeast of site. Tree is downwind of site, under W, SW, W, NW, N, or NE winds. SPM site not required to meet Appendix E requirements.	Tree is about 6 m, southeast of site. Tree is downwind of site, under W, SW, W, NW, N, or NE winds. SPM site not required to meet Appendix E requirements.
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	N/A
Residence Time	2 seconds	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Daily	N/A
Last Annual Performance Evaluation (gaseous)	Date: 6/18/09	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sloughhouse-7520 Sloughhouse Rd	
AQS Site No.	06-067-5003	
Geographic Coordinates	N 38 deg 29 min 40 sec, W 121 deg 12 min 40 sec	
Location	Fire Station in rural area located about 16.5 miles east-southeast of downtown Sacramento.	
Address	7520 Sloughhouse Road, Sloughhouse, CA 95683	
County	Sacramento	
Distance from roadway	27 meters	
Average Daily Traffic	200 Vehicles/Day	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Wind Direction	Wind Speed
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Wind Vane	Anemometer
Analysis Method	Vector Summation	Vector Summation
Make/Model	Climatronics F-460 WD sensor	Climatronics F-460 WS sensor
Start Date	7/1997	7/1997
Operating Schedule	Daily	Daily
Sample Season	April-October	April-October
Probe Height (meters, agl)	5.2	5.2
Statement of purpose of monitor	Measure representative WD data at this seasonal downwind O3 monitor.	Measure representative WS at seasonal downwind O3 monitor.
Site Type (i.e., SLAMS, PAMS)	SPM	SPM
Distance from Supporting Structure	2.4 m	2.4 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	6 m	6 m
Distance from trees	2.4 m	2.4 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	N/A	N/A
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

B.9 Sacramento Health Dept-Stockton Blvd

This PM monitoring site has been in existence since the late 1950s. This site measures PM-10 SSI, PM-10 TEOM, and PM-2.5 FRM.

Site Name	Sacramento Health Department-Stockton Blvd.	
AQS Site No.	06-067-4001	
Geographic Coordinates	N 38 deg 33 min 23 sec, W 121 deg 27 min 31 sec	
Location	Rooftop in urban area located about 2 miles east-southeast of downtown Sacramento.	
Address	2221 Stockton Blvd, Sacramento, CA 95817	
County	Sacramento	
Distance from roadway	46 meters	
Average Daily Traffic	16,000 Vehicles/Day	
Ground Cover	Rooftop (surrounding area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	TEOM-PM_{10}	PM_{10} SSI
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	TEOM	High Volume/Size Selective Inlet
Analysis Method	Machine Average	Gravimetric
Make/Model	R & P 1400A	Sierra Anderson 1200
Start Date	8/1994	1/1986
Operating Schedule	Daily	1:6
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.4	5.4
Statement of purpose of monitor	Measure representative concentrations within or near Central Business Area	Measure representative concentrations within or near Central Business area
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS
Distance from Supporting Structure	2.0 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	Yes	Yes
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	Monthly
Frequency of flow rate verification for automated PM analyzers audit	Bi-monthly	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 2/19/09 (EPA), 8/31/09 (CARB)	Date: 2/19/09 (EPA), 8/31/09 (CARB)

Site Name	Sacramento Health Department-Stockton Blvd.	
AQS Site No.	06-067-4001	
Geographic Coordinates	N 38 deg 33 min 23 sec, W 121 deg 27 min 31 sec	
Location	Rooftop in urban area located about 2 miles east-southeast of downtown Sacramento.	
Address	2221 Stockton Blvd, Sacramento, CA 95817	
County	Sacramento	
Distance from roadway	46 meters	
Average Daily Traffic	16,000 Vehicles/Day	
Ground Cover	Rooftop (surrounding area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	$PM_{2.5}$ FRM	
Monitoring Objective	RC	
Spatial Scale of Representativeness	Neighborhood	
Sampling Method	Low Volume/Very Sharp Cut Cyclone	
Analysis Method	Gravimetric	
Make/Model	R & P 2025 FRM Sampler (Sequential)	
Start Date	1/1999	
Operating Schedule	1:3	
Sample Season	January-December	
Probe Height (meters, agl)	5.4	
Statement of purpose of monitor	Measure representative concentrations within or near Central Business area	
Site Type (i.e., SLAMS, PAMS)	SLAMS	
Distance from Supporting Structure	2.0 m	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	N/A	
Distance from trees	> 20 m	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	N/A	
Residence Time	N/A	
Any changes in the next 18 months?	Yes	
Suitable for comparison to Annual PM2.5 NAAQS	Yes, Suitable for comparison to Annual PM2.5 NAAQS	
Frequency of flow rate verification for manual PM samplers audit	Monthly	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	
Last two semi-annual flow rate audits for PM monitors	Date: 2/19/09 (EPA), 8/31/09 (CARB)	

B.10 Sacramento-T Street

The Sacramento- T Street site is operated by the California Air Resources Board/Monitoring and Laboratory Division/Air Monitoring- North Section. This site has been in existence since 1989.

This middle scale SLAMS air monitoring site measures O_3, CO, NO_2, PM-2.5 FRM, Speciated PM2.5, PM-2.5 BAM, PM-10 SSI, WD, WS, TMP, RH, and Atmospheric Pressure.

Site Name	Sacramento-1309 T Street	
AQS Site No.	06-067-0010	
Geographic Coordinates	N 38 deg 34 min 6 sec, W 121 deg 29 min 35 sec	
Location	Residential area located in downtown Sacramento	
Address	1309 T Street, Sacramento, CA 95814	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	5000 Vehicles/Day	
Ground Cover	Rooftop site (residential area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	Nitrogen Dioxide
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Urban	Middle
Sampling Method	UV Absorption	Chemiluminescence
Analysis Method	Machine average	Machine average
Make/Model	API 400	TECO 42C
Start Date	4/1989	4/1989
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	11.7	11.7
Statement of purpose of monitor	Typical concentrations in area of high population density	Typical concentrations in area of high population density
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS
Distance from Supporting Structure	3.0 m	3.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	5.4	6.0
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Daily	Daily
Last Annual Performance Evaluation (gaseous)	Date: 10/12/09	Date: 10/12/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-1309 T Street	
AQS Site No.	06-067-0010	
Geographic Coordinates	N 38 deg 34 min 6 sec, W 121 deg 29 min 35 sec	
Location	Residential area located in downtown Sacramento	
Address	1309 T Street, Sacramento, CA 95814	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	5000 Vehicles/Day	
Ground Cover	Rooftop site (residential area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	PM-10 SSI	BAM-$PM_{2.5}$
Monitoring Objective	HC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Hi-Volume/Size Selective Inlet	Low Volume/Very Sharp Cut Cyclone
Analysis Method	Gravimetric	Beta Attenuation
Make/Model	Anderson SA 1200	Met-One BAM
Start Date	4/1989	5/2004
Operating Schedule	1:6	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10.0	10.0
Statement of purpose of monitor	Typical concentrations in area of high population density	Population Exposure
Site Type (i.e., SLAMS, PAMS)	SLAMS	Unknown
Distance from Supporting Structure	1.5 m	2.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	Monthly	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	Bi-monthly
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Dates: 3/27/09 (EPA), 10/12/09 (CARB)	Dates: 3/27/09 (EPA), 10/12/09 (CARB)

Site Name	Sacramento-1309 T Street	
AQS Site No.	06-067-0010	
Geographic Coordinates	N 38 deg 34 min 6 sec, W 121 deg 29 min 35 sec	
Location	Residential area located in downtown Sacramento	
Address	1309 T Street, Sacramento, CA 95814	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	5000 Vehicles/Day	
Ground Cover	Rooftop site (residential area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	$PM_{2.5}$ FRM Sampler	Ambient Temperature
Monitoring Objective	RC	N/A
Spatial Scale of Representativeness	Neighborhood	N/A
Sampling Method	Low volume/Very Sharp Cut Cyclone	Thermistor
Analysis Method	Gravimetric	Machine Average
Make/Model	R & P 2025	Met-One 060A-2
Start Date	12/1998	2/1992
Operating Schedule	1:3	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10.0	15.0
Statement of purpose of monitor	Population Exposure	N/A
Site Type (i.e., SLAMS, PAMS)	SLAMS	Other
Distance from Supporting Structure	1.5 m	9.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	Yes, suitable for comparison to Annual PM2.5 NAAQS	N/A
Frequency of flow rate verification for manual PM samplers audit	Monthly	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Dates: 3/27/09 (EPA), 10/12/09 (CARB)	N/A

Site Name	Sacramento-1309 T Street	
AQS Site No.	06-067-0010	
Geographic Coordinates	N 38 deg 34 min 6 sec, W 121 deg 29 min 35 sec	
Location	Residential area located in downtown Sacramento	
Address	1309 T Street, Sacramento, CA 95814	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	5000 Vehicles/Day	
Ground Cover	Rooftop site (residential area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Wind Direction	Wind Speed
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Wind Vane	Wind Cups
Analysis Method	Vector Summation	Vector Summation
Make/Model	Met-One 020-C	Met-One 010-C
Start Date	2/1992	2/1992
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	15.0	15.0
Statement of purpose of monitor	N/A	N/A
Site Type (i.e., SLAMS, PAMS)	Other	Other
Distance from Supporting Structure	9.0 m	9.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-1309 T Street	
AQS Site No.	06-067-0010	
Geographic Coordinates	N 38 deg 34 min 6 sec, W 121 deg 29 min 35 sec	
Location	Residential area located in downtown Sacramento	
Address	1309 T Street, Sacramento, CA 95814	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	5000 Vehicles/Day	
Ground Cover	Rooftop site (residential area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Barometric Pressure	Relative Humidity
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Barometric sensor	Polymer Thin Film Capacitor
Analysis Method	Machine Average	Machine Average
Make/Model	Met-One 090D-26	Met-One 083D-0-6
Start Date	2/1992	2/1992
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	12.0	15
Statement of purpose of monitor	N/A	N/A
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS
Distance from Supporting Structure	2.0 m	9.0 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Sacramento-1309 T Street	
AQS Site No.	06-067-0010	
Geographic Coordinates	N 38 deg 34 min 6 sec, W 121 deg 29 min 35 sec	
Location	Residential area located in downtown Sacramento	
Address	1309 T Street, Sacramento, CA 95814	
County	Sacramento	
Distance from roadway	30 meters	
Average Daily Traffic	5000 Vehicles/Day	
Ground Cover	Rooftop site (residential area is paved)	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Speciated PM2.5	
Monitoring Objective	RC	
Spatial Scale of Representativeness	Neighborhood	
Sampling Method	SASS	
Analysis Method	XRF/TOT/IC	
Make/Model	Met One SASS	
Start Date	4/2007	
Operating Schedule	1:6	
Sample Season	January-December	
Probe Height (meters, agl)	10.0	
Statement of purpose of monitor	Collect elevated wintertime PM2.5 emissions from motor vehicles and residential wood combustion	
Site Type (i.e., SLAMS, PAMS)	SPM (not a STN site)	
Distance from Supporting Structure	1.9 m	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	N/A	
Distance from trees	50 m	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	N/A	
Residence Time	N/A	
Any changes in the next 18 months?	No	
Suitable for comparison to Annual PM2.5 NAAQS	N/A	
Frequency of flow rate verification for manual PM samplers audit	Monthly	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	

B.11 Rancho Seco

Rancho Seco is a seasonal PM2.5 special purpose monitoring site, established in November 2008. The data will be collected, during the months of November through March, from the years: 2009-2011, for the South Sacramento County Winter PM2.5 Study.

Site Name	Rancho Seco	
AQS Site No.	NA	
Geographic Coordinates	N 38 deg 20 min 37.32 sec, W 121 deg 6 min 36.36 sec	
Location	Located at former Rancho Seco Nuclear Power Plant in rural area located about 27 miles southeast of downtown Sacramento.	
Address	Street address is unknown, City = Herald, CA 95638	
County	Sacramento	
Distance from roadway	Approximately 75 feet	
Average Daily Traffic	1,000-2,000 Vehicles/Day (estimated)	
Ground Cover	Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	PM2.5	
Monitoring Objective	RC	
Spatial Scale of Representativeness	N/A	
Sampling Method	Low Volume/Very Sharp Cut Cyclone	
Analysis Method	Beta Attenuation	
Make/Model	Met One E-BAM	
Start Date	11/2008	
Operating Schedule	Daily	
Sample Season	November-March	
Probe Height (meters, agl)	2.0	
Statement of purpose of monitor	Measure rural PM2.5 concentration, during winter season.	
Site Type (i.e., SLAMS, PAMS)	SPM	
Distance from Supporting Structure	N/A	
Distance from Obstructions on Roof	N/A	
Distance from Obstructions not on Roof	N/A	
Distance from trees	> 10 meters	
Distance to furnace or incinerator flue	N/A	
Distance Between Collocated Monitors	N/A	
Unrestricted airflow >= 270 deg arc	Yes	
Probe Material	N/A	
Residence Time	N/A	
Any changes in the next 18 months?	No	
Suitable for comparison to Annual PM2.5 NAAQS	N/A	
Frequency of flow rate verification for manual PM samplers audit	N/A	
Frequency of flow rate verification for automated PM analyzers audit	N/A	
Frequency of one-point QC check (gaseous)	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	

APPENDIX C

Recent Discontinued Monitoring Site

C.1 Sacramento- Airport Road

This site was established in 1998. This site replaced the former Sacramento- Earhart Rd site. The Airport Rd site measures O_3, CO, NO_2, Total NMHC, PM-10 SSI, WD, WS, TMP, RH, and SRD.

This site is a PAMS Type 2 (secondary) site. Due to the California Alternative Plan III (CAP-III), we are not required to collect speciated VOC at this site.

During early August 2008, this air monitoring station was relocated to 68 Goldenland Court, which is located about 1 mile to the northeast from the current site (see Appendix B.5, page 39).

Site Name	Airport Road	
AQS Site No.	06-067-0013	
Geographic Coordinates	N 38 deg 38 min 12 sec ,W 121 deg 30 min 51 sec	
Location	Inactive Airport located about 4 miles north-northwest of downtown Sacramento. This was formerly a rural area. Area now being converted to new residential subdivisions, during the last few years.	
Address	3801 Airport Road, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway (meters)	51 feet	
Average Daily Traffic	100 Vehicles/Day	
Ground Cover	Non-Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Ozone	Carbon Monoxide
Monitoring Objective	RC	RC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	UV Absorption	NDIR
Analysis Method	Machine Average	Machine Average
Make/Model	API 400	TECO 48 CO Analyzer
Start Date	5/1998	5/1998
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measure ozone near downwind edge of Central Business District during summer ozone season (PAMS Type 2- secondary site)	Measure representative concentrations
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2-secondary site)	SLAMS
Distance from Supporting Structure	1.9 m	1.9 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	15 Seconds	19 Seconds
Any changes in the next 18 months?	No	Yes
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Airport Road	
AQS Site No.	06-067-0013	
Geographic Coordinates	N 38 deg 38 min 12 sec ,W 121 deg 30 min 51 sec	
Location	Inactive Airport located about 4 miles north-northwest of downtown Sacramento. This was formerly a rural area. Area now being converted to new residential subdivisions, during the last few years.	
Address	3801 Airport Road, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway (meters)	51 feet	
Average Daily Traffic	100 Vehicles/Day	
Ground Cover	Non-Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Nitrogen Dioxide	Total NMHC
Monitoring Objective	HC	HC
Spatial Scale of Representativeness	Neighborhood	Neighborhood
Sampling Method	Chemiluminesence	GC
Analysis Method	Machine Average	FID
Make/Model	TECO 42C NO2 Analyzer	TECO 55C Total NMHC Analyzer
Start Date	5/1998	5/1998
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.3	5.3
Statement of purpose of monitor	Measure ozone precursors near downwind edge of Central Business District during summer O3 season (PAMS Type 2 secondary site)	Measure Total NMHC near downwind edge of Central Business District (PAMS Type 2 secondary site)
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2-secondary site)	SLAMS (PAMS Type 2-secondary site)
Distance from Supporting Structure	1.9 m	1.9 m
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	FEP Teflon	FEP Teflon
Residence Time	18 seconds	19.6 seconds
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	Every other day	Every other day
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Airport Road	
AQS Site No.	06-067-0013	
Geographic Coordinates	N 38 deg 38 min 12 sec ,W 121 deg 30 min 51 sec	
Location	Inactive Airport located about 4 miles north-northwest of downtown Sacramento. This was formerly a rural area. Area now being converted to new residential subdivisions, during the last few years.	
Address	3801 Airport Road, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway (meters)	51 feet	
Average Daily Traffic	100 Vehicles/Day	
Ground Cover	Non-vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	PM10-SSI	Ambient Temperature
Monitoring Objective	RC	N/A
Spatial Scale of Representativeness	Neighborhood	N/A
Sampling Method	High Volume/Size Selective Inlet	Thermistor
Analysis Method	Gravimetric	Machine Average
Make/Model	Sierra Anderson 1200	Climatronics 100093
Start Date	5/1998	5/1998
Operating Schedule	1:6	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	5.4	10
Statement of purpose of monitor	Measure representative concentrations	Measure representative meteorology at PAMS Type 2 secondary site
Site Type (i.e., SLAMS, PAMS)	SLAMS	SLAMS (PAMS Type 2 secondary site)
Distance from Supporting Structure	2.0 m	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	N/A
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	Yes	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	Monthly	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	Date: 8/17/07 (EPA), 9/13/07 (CARB), 7/1/08 (EPA)	N/A

Site Name	Airport Road	
AQS Site No.	06-067-0013	
Geographic Coordinates	N 38 deg 38 min 12 sec ,W 121 deg 30 min 51 sec	
Location	Inactive Airport located about 4 miles north-northwest of downtown Sacramento. This was formerly a rural area. Area now being converted to new residential subdivisions, during the last few years.	
Address	3801 Airport Road, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway (meters)	51 feet	
Average Daily Traffic	100 Vehicles/Day	
Ground Cover	Non-vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Wind Direction	Wind Speed
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Wind Vane	Wind cups
Analysis Method	Vector Summation	Vector Summation
Make/Model	Climatronics F-460 WD sensor	Climatronics F-460 WS sensor
Start Date	5/1998	5/1998
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Measure representative meteorology at the PAMS Type 2 secondary site	Measure representative meteorology at PAMS Type 2 secondary site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 secondary site)	SLAMS (PAMS Type 2 secondary site)
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

Site Name	Airport Road	
AQS Site No.	06-067-0013	
Geographic Coordinates	N 38 deg 38 min 12 sec ,W 121 deg 30 min 51 sec	
Location	Inactive Airport located about 4 miles north-northwest of downtown Sacramento. This was formerly a rural area. Area now being converted to new residential subdivisions, during the last few years.	
Address	3801 Airport Road, Sacramento, CA 95834	
County	Sacramento	
Distance from roadway (meters)	51 feet	
Average Daily Traffic	100 Vehicles/Day	
Ground Cover	Non-Vegetated	
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA	
Pollutant	Relative Humidity	Solar Radiation
Monitoring Objective	N/A	N/A
Spatial Scale of Representativeness	N/A	N/A
Sampling Method	Hygroscopic Plastic Film	Pyranometer
Analysis Method	Machine Average	Machine Average
Make/Model	Climatronics 101669	Climatronics 100848
Start Date	5/1998	5/1998
Operating Schedule	Daily	Daily
Sample Season	January-December	January-December
Probe Height (meters, agl)	10	10
Statement of purpose of monitor	Measure representative meteorology at PAMS Type 2 secondary site	Measure representative meteorology at PAMS Type 2 secondary site
Site Type (i.e., SLAMS, PAMS)	SLAMS (PAMS Type 2 secondary site)	N/A
Distance from Supporting Structure	N/A	N/A
Distance from Obstructions on Roof	N/A	N/A
Distance from Obstructions not on Roof	N/A	N/A
Distance from trees	> 20 m	> 20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance Between Collocated Monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe Material	N/A	N/A
Residence Time	N/A	N/A
Any changes in the next 18 months?	No	No
Suitable for comparison to Annual PM2.5 NAAQS	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A

APPENDIX D

Definition of Abbreviations

ADT= Average Daily Traffic
AGL= Above ground level
AIR= Sacramento-Airport Road air monitoring site
ARM= Approved Regional Monitor
AQS= Air Quality System in AIRS, Aerometric Information Retrieval System

BAM= Beta Attenuation Monitor
BC= Sacramento-Branch Center #2 air monitoring site
BL= General/Background
BRU= Elk Grove-Bruceville air monitoring site

CARB= California Air Resources Board
CFR= Code of Federal Regulations
CO= Carbon Monoxide

DPM= Sacramento-Del Paso Manor air monitoring site

ECW= Sacramento-El Camino/Watt air monitoring site
EPA= U.S Environmental Protection Agency

FEM= Federal Equivalent Method
FID= Flame Ionization Detector
FOL= Folsom-Natoma air monitoring site
FRM= Federal Reference Method

GC= Gas Chromatography
GOL= Sacramento- Goldenland Court air monitoring site

HC= Highest Concentration

IM= Source Impact

M= Meters
MET= Meteorological sensor
MI= Microscale
MS= Middle Scale
MSA= Metropolitan Statistical Area

NAAQS= National Ambient Air Quality Standard
NCore= National Core ambient monitoring network
NDIR= Non-dispersive Infrared Spectrometry
NH= North Highlands-Blackfoot air monitoring site
NAT= Folsom-Natoma air monitoring site
NMHC= Non-Methane Hydrocarbon
NO_2= Nitrogen Dioxide
NO_X= Oxides of Nitrogen
NO_Y= Reactive Oxides of Nitrogen

NPAP= National Performance Audit Program (Criteria pollutant monitors)
NPEP (or PEP) = National Performance Evaluation Program (PM2.5 FRM)
NS= Neighborhood Scale

O_3= Ozone

PAMS= Photochemical Assessment Monitoring sites
Pb= Lead
PM= Particulate Matter
PM-2.5= Particulate Matter- 2.5 micron
PM-10= Particulate Matter- 10 micron
PM-Coarse= Particulate Matter > 2.5 micron and < 10 micron (PM10-2.5)
PPB= Parts per Billion

QA= Quality Assurance
QAPP= Quality Assurance Project Plan
QMP= Quality Management Plan

RC= Representative Concentration
RH= Relative Humidity
RS= Rancho Seco monitoring site

SASS= PM-2.5 Speciation sampler
SCK= Sacramento Health Department- Stockton Blvd. air monitoring site
SIP= State Implementation Program
SJV = San Joaquin Valley
SLAMS= State and Local air monitoring sites
SLU= Sloughhouse air monitoring site
SMAQMD= Sacramento Metropolitan AQMD
SO_2= Sulfur Dioxide
SO_4- Sulfate
SPM= Special Purpose Monitoring
SRD= Solar Radiation
SSI= Size Selective Inlet, PM-10 FRM sampler
STN= Speciation Trends Network

TEOM= Tapered Element Oscillating Microbalance
THC= Total Hydrocarbon
TNMHC- Total Non-methane hydrocarbon
T St. - Sacramento-T Street air monitoring site

US= Urban Scale
UV= Ultraviolet

VOC= Volatile Organic Compounds

WD= Wind Direction
WF= Welfare Based
WS= Wind Speed